

Predicting associate degree students' psychological stress levels with self-perceptions of failure, academic performance and grit

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Background

- The sector of self-financed associate degree has flourished since 2000 (Lee & Young, 2003)
- It models the American's two-tier system (Postiglione, 2009):
 - Lower-tier community college
 - Higher-tier university
- Due to different funding models, in Hong Kong context, much public concern and research efforts have only focused on the articulation rate of associate degree graduates (Kember, 2010).
- Relatively less has been done to examine associate degree students' development (Lee, 2014).
 - Does this tier of education add value to students' development?

Previous efforts of our team

- Lee and colleagues (2013; 2014) examined impact of associate degree learning environment on students' generic competences development.
 - The dynamics of learning environment facets and their influence on students' generic competences are the same as those found in university contexts
 - Associate degree programs do foster growth in generic competences of students
- So and colleagues (2013;2014) examined impact of secondary school reform on students' generic competences.

Research gap

Much has been focused on academic and cognitive development, little has been known about associate degree students' psychological well-being.

- Basic: How stressful are associate degree students?
- Applied: What factors contribute to their stress? Is it actuality or is it psychological?
- Scholarly: Grit (Duckworth & Quinn, 2010) has been found to yield positive impact on academic performance, how does it applied to Chinese?
 - Grit pertains to two the dimension of Interest and dimension of Perseverance. It has been found to predict academic success more effectively than using the indicator of intelligence.

Aims

- To examine associate degree students' stress level.
- To examine the factors contributing to associate degree students' psychological stress levels.
- To examine the role of Grit on students' stress level.

Methodology

Participants

- By convenient sampling
- Three hundred and forty-five associate degree students from a community college in Hong Kong were invited to fill out a questionnaire voluntarily at the beginning of academic year.

Methodology: Instrument

The questionnaire consists of 24 items on a 5-point Likert scale:

- 12 items measure Grit (Duckworth & Quin, 2010);
 - “I often set a goal but later choose to pursue a different one” (reversed)
 - “Setbacks don’t discourage me”
- 10 items measure global psychological stress (Cohen, Kamarck, Memelstein, 1983);
 - “How often have you felt that you were unable to control the important things in your life?”
- 1 measure perceived levels of failure in DSE.
 - “Do you consider the DSE performance a failure?”
- students’ self-reported DSE scores.

Results 1

Table. 1. Means and standard deviations of associate degree students' Perceived failure, DSE score, Interest, Perseverance and Stress level

	N	Mean	Std. Deviation	Reliability
Failure	309	3.29	.99	--
DSE score	307	17.02	2.30	--
Interest	345	2.90	.55	0.67
Perseverance	345	3.19	.52	0.72
Stress	345	3.18	.38	0.67

Result 2

Correlation among associate degree students' Perceived failure, DSE score, Interest, Perseverance and Stress level

	Failure	DSE score	Interest	Perseverance	Stress
Failure		.04	-.76	-.01	.17**
DSE score			.05	.09	.06
Interest				-.23**	-.31**
Perseverance					.32**
Stress					

** . Correlation is significant at the 0.01 level (2-tailed)

Result 3

Table. 3 Regression analysis on perceived failure, interest, perseverance and DSE score predicting associate degree students' stress level

	standardized	t	Sig.	95.0% confidence interval for	
	coefficients			B	
	β			lower bound	upper bound
Interest	-.24	-4.33	.00	-.24	-.09
Perseverance	.22	3.94	.00	.08	.24
Failure	.18	3.17	.00	.03	.11
DSE score	.02	.38	.70	-.01	.02

Findings

- Associate degree students' level of stress is not very high.
- Regression analysis showed that students' psychological stress levels were significantly predicted by:
 - self-perceived failure in DSE (+ve),
 - Interest (-ve) and perseverance (+ve)
 - but not the DSE scores.
- The results highlight the importance of students' interpretation of academic failure but not the actual performance in contributing to psychological stress.

Practical implication

- May be is not about how much more external resources/support to provide but what content to provide
- Need to find means to address students' psychological meaning system about 'failure'
 - Systematic efforts can be made to design student development activities to help students frame and interpret their prior academic disappointments and failures constructively.

Theoretical significance

- The idea of grit, which has received much attention in western studies, may not seem to be all-positive to Hong Kong Chinese college students, as it seems to be related to higher psychological stress levels.
 - The more we persevere, the more stressful we feel (but we are more likely to success). But why? What is the mechanism?

Limitations

- Data collected from one community college in Hong Kong limits generalizability
- Actual DSE score, if can be obtained, will increase validity of the findings
- Different descriptive analyses should be done to examine students' stress level, as the use of mean may have washed down interesting distribution

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